

Appl. No. 10/661,492  
Reply to Office action of November 16, 2007

### REMARKS/ARGUMENTS

#### Request for Continued Examination:

5 The applicant respectfully requests continued examination of the above-indicated application as per 37 CFR 1.114.

Claims 24-26, 29-35 and 38-43 remain in this application. Claims 1-23, 27-28 and 36-37 have been cancelled without prejudice. Claims 38-43 are newly added without entering any new matters.

10

The Examiner is thanked for the thorough examination of the present application. Applicants have made an amendment to the claims, and assert that the remaining claims are patentable for at least the reasons set forth herein.

#### 15 Response to the drawing objections:

Figures 1 and 3 have been amended without entering any new matters. The related description can be found on pages 5 and 8 in the original specification of this application.

#### 20 Response to the claim rejections:

Claims 24 and 29-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Adams (U.S. Patent No. 6,594,366). Applicants have amended claim 24, which recites:

25 Claim 24 (Currently Amended): An apparatus for automatically determining a type of an external device, comprising:  
a jack for coupling the external device;  
an impedance detecting circuit, coupled to the external device through the

Appl. No. 10/661,492  
Reply to Office action of November 16, 2007

jack, for generating a first analog signal according to an impedance of the  
external device and a first resistance, a second analog signal according to  
the impedance of the external device and a second resistance and a third  
analog signal according to the impedance of the external device and a third  
5 resistance, wherein the first, second and third resistances are different three  
or more analog signals according to an impedance of the external device;  
an analog-to-digital converter, coupled to the impedance detecting circuit, for  
converting the first, second and third analog signals to a plurality of digital  
values which includes first, second and third digital values, respectively;  
10 and  
a control circuit, coupled to the analog-to-digital converter, for determining  
the type of the external device when the first digital value falls within a  
first predetermined range, the second digital value falls within a second  
predetermined range, the third digital value falls within a third  
15 predetermined range and all of the first, second and third predetermined  
ranges digital values together indicate a same recognized condition among  
a plurality of predetermined recognized conditions[.];  
wherein the impedance detecting circuit comprises a plurality of resistors,  
which couples together in parallel, for providing the first, second and third  
20 resistance.

Applicants accordingly assert that the amended claim 24 is patentable over Adams  
because Adams fails to disclose a combination of all of the claimed limitations. The  
claimed invention teaches an apparatus for determining a type of AN external device by  
25 generating a first, second and third analog signals; converting the three analog signals into  
a first, second and third digital values; and determining the type of THE external device  
when each of the three digital values falls within a predetermined range and ALL of the  
predetermined ranges together indicate a same recognized condition. Adams at most

Appl. No. 10/661,492  
Reply to Office action of November 16, 2007

teaches a sensor 210 configured to detect the presence of a plug for a cellular phone 106 or a plug for a stereo headset 108, but is silent about "generating a first analog signal according to an impedance of the external device and a first resistance, a second analog signal according to the impedance of the external device and a second resistance and a third analog signal according to the impedance of the external device and a third resistance, wherein the first, second and third resistances are different" as recites in the amended claim 24. Moreover, Adams fails to disclose a control circuit with the claimed function and an impedance detecting circuit with a plurality of resistors coupled together in parallel for providing a first, second and third resistance. Therefore, the amended claim 24 is patentable over Adams.

Although the other cited reference, Dao (U.S. Patent No. 6,407,633), teaches an apparatus for stabilizing feedback-controlled amplifiers, Dao still fails to compensate for the deficiencies of Adams such as: "generating a first analog signal according to an impedance of the external device and a first resistance, a second analog signal according to the impedance of the external device and a second resistance and a third analog signal according to the impedance of the external device and a third resistance, wherein the first, second and third resistances are different; and determining the type of the external device when the first digital value falls within a first predetermined range, the second digital value falls within a second predetermined range, the third digital value falls within a third predetermined range and ALL of the first, second and third predetermined ranges together indicate a same recognized condition among a plurality of predetermined recognized conditions." Dao at most discloses a capacitor network having controllable impedance but fails to teach or suggest the above-mentioned claimed limitations, especially the limitations of utilizing ALL of a first, second and third predetermined ranges to indicate a same recognized condition and accordingly determining the type of an external device. Therefore, the amended claim 24 is also patentable over Adams in view of Dao. Since claims 24-26 and 29-32 are dependent upon

Appl. No. 10/661,492  
Reply to Office action of November 16, 2007

claim 24, if claim 24 is found to be allowable, so too should the dependent claims.

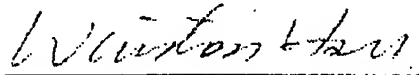
Applicants also assert that the independent claims 33 and 38 are patentable over Adams in view of Dao because of at least the same reasons placing claim 24 allowable.

- 5 Since claims 34-37 and 39-43 are respectively dependent upon claims 33 and 38, if the independent claims are found to be allowable, so too should the dependent claims.

**Conclusion:**

- 10 Therefore, all pending claims are submitted to be in condition of allowance. The Examiner is encouraged to telephone the undersigned if there are informalities that can be resolved in a phone conversation, or if the Examiner has any ideas or suggestions for further advancing the prosecution of this case.

- 15 Sincerely yours,



Date: 01.30.2008

Winston Hsu, Patent Agent No. 41,526

P.O. BOX 506, Merrifield, VA 22116, U.S.A.

- 20 Voice Mail: 302-729-1562

Facsimile: 806-498-6673

e-mail : winstonhsu@naipo.com

- Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C.  
25 is 13 hours behind the Taiwan time, i.e. 9 AM in D.C. = 10 PM in Taiwan.)